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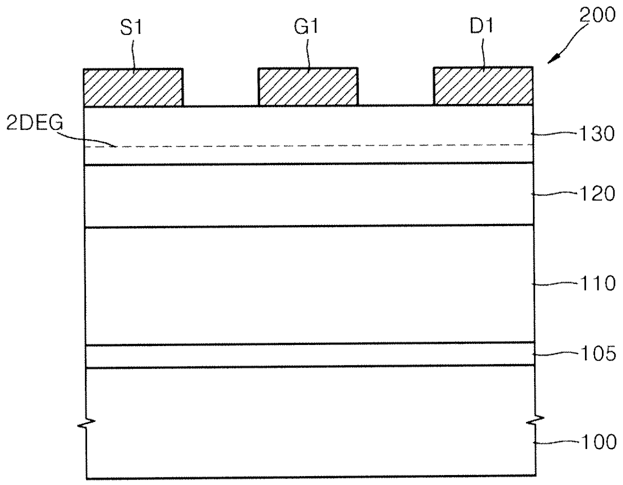
(54) Gallium Nitride Based Semiconductor Devices and Methods of Manufacturing the Same

(57) Gallium nitride (GaN) based semiconductor devices and methods of manufacturing the same. The GaN-based semiconductor device may include a heat dissipation substrate (that is, a thermal conductive substrate); a GaN-based multi-layer arranged on the heat dissipation substrate and having N-face polarity; and a heterostructure field effect transistor (HFET) or a Schottky electrode arranged on the GaN-based multi-layer. The HFET device may include a gate having a double recess structure. While such a GaN-based semiconductor device is being manufactured, a wafer bonding process and a laser lift-off process may be used.

FIG. 1



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EUROPEAN SEARCH REPORT

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	24 June 2013	Baillet, Bernard

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